

Properties and Changes in Matter

2-4 The student will demonstrate an understanding of the properties of matter and the changes that matter undergoes. (Physical Science)

2.4.4 Recognize that different materials can be mixed together and then separated again.

Taxonomy level: 1.1-A Remember Factual Knowledge

Previous/Future knowledge: This is the first time that students have investigated the concepts of mixtures and separation. This is foundational knowledge that will be further developed in 5th grade (5-4.2) when students summarize the characteristics of a mixture, recognizing a solution as a kind of mixture and use the processes of filtration, sifting, magnetic attraction, evaporation, chromatography, and floatation to separate mixtures.

It is essential for students to know that materials can be mixed together and then separated again.

- For example, a salad may contain lettuce, tomatoes, and cucumbers. The ingredients can be mixed all together and then separated out again.
- Another example may be taking a handful of different coins or buttons and separating them out into the individual types of coins or buttons.

It is not essential for students to work with mixtures that cannot be separated (flour and eggs) at this grade level.

Assessment Guidelines:

The objective of this indicator is to *recognize* that materials can be mixed together and then separated; therefore, the primary focus of assessment should be to remember that some mixtures can be separated.